IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx BAS 08.0125X issue No.:1

Certificate history:
Issue No. 1 (2010-12-6)
Issue No. 0 (2009-1-20)

Status: **Current**

Date of Issue: **2010-12-06** Page 1 of 4

Applicant:
Hawke International
A Division of Hubbell Limited
A Member of the Hubbell Group of Companies
Oxford Street West
Ashton-under-Lyne
Lancashire
OL7 0NA
United Kingdom

Electrical Apparatus: **Type EZE range of sheet metal junction boxes**
Optional accessory:

Type of Protection: **Increased Safety Ex e**

Marking: **Exe II Ex tD A21 T(see schedule) T80°C IP66**

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Managing Director

Signature:
(for printed version)

Date: 6/12/10

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Baseefa
Rockhead Business Park
Staden Lane
Buxton
Derbyshire
SK17 9RZ
United Kingdom

Baseefa

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Certificate No.: IECEx BAS 08.0125X

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Manufacturer:

Hawke International
A Division of Hubbell Limited
A Member of the Hubbell Group of Companies
Oxford Street West
Ashton-under-Lyne
Lancashire
OL7 0NA
United Kingdom

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/BAS/ExTR08.0258/00
GB/BAS/ExTR10.0270/00

Quality Assessment Report:

GB/BAS/QAR06.0061/00

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Certificate No.: IECEx BAS 08.0125X

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The Type EZE Range of Junction Boxes, comprising the component certified range of empty enclosures covered by Certificate No. IECEx BAS 08.0124U, coded Ex e II. Intermediate sizes of enclosure may be used in accordance with Component Certificate IECEx BAS 08.0124U.

The Junction Boxes may be fitted with a variety of different rail mounted terminal arrangements. All terminals are covered by their own component certificates and are coded Exe II. The terminals permitted are listed on Drawing Number D9160 held on Baseefa General Technical File 0500 and on the Assembly Instructions. The terminals shall be used within their relevant temperature range and ratings and installed by Hawke International.

See annex for full description

CONDITIONS OF CERTIFICATION: YES as shown below:

See annex for Special Conditions.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 1.1

Addition of Special Conditions for Safe Use No. 13 regarding closing of unused entries.

ExTR: **GB/BAS/ExTR10.0270/00** File Reference: **10/0718**

Annexe: IECEx BAS 08 0125X ANNEX 1.pdf

Baseefa
Rockhead Business Park
Staden lane, Buxton, Derbyshire
SK17 9RZ
United Kingdom

ANNEX to IECEx BAS 08.0125X | Issue No. 1 | Date: 2010/12/02

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The Junction Boxes may be fitted with a variety of different rail mounted terminal arrangements. All terminals are covered by their own component certificates and are coded Exe II. The terminals permitted are listed on Drawing Number D9160 held on Baseefa General Technical File 0500 and on the Assembly Instructions. The terminals shall be used within their relevant temperature range and ratings and installed by Hawke International.

The terminals must be used within their relevant temperature, current and voltage limitations whilst complying with all their relevant Schedule of Limitations and creepage and clearance distances required by IEC 60079-7.

Table of maximum power ratings and cable lengths

BOX TYPE	Maximum Power Dissipation (Watts)																		Max. Cable Length per Terminal (M)
	T_{rating} T6	T_{duct} 80°C	T_{amb} -40°C +40°C	T_{rating} T6	T_{duct} 80°C	T_{amb} -40°C +55°C	T_{rating} T6	T_{duct} 80°C	T_{amb} -40°C +65°C	T_{rating} T5	T_{duct} 80°C	T_{amb} -40°C +40°C	T_{rating} T5	T_{duct} 80°C	T_{amb} -40°C +55°C	T_{rating} T5	T_{duct} 80°C	T_{amb} -40°C +65°C	
EZE 22	17.7W			11W			6.6W			24.3W			17.7W			13.3W			0.425
EZE 42	27W			16.9W			10.1W			37W			27W			20.2W			0.555
EZE 62	31.5W			19.9W			11.9W			43.7W			31.8W			23.8W			0.719

The maximum number of terminals which may be fitted into each enclosure is calculated using the following formula:

Power = $I^2 \times N(R_t + R_c)$ Watts

where:

I = actual current through the conductor up to the maximum certified current of the terminal (amps)
N = number of terminals
R_t = terminal resistance (Ohms @ 20°C)
R_c = resistance of one conductor (Ohms @ 20°C) when using a maximum diagonal cable length listed in the above table

The Certification Label may be metal that is riveted or screwed or self adhesive foil, as shown on the certification drawings. Additional labels may be fitted externally or internally for certification or general marking use.

When required, Exe II terminals for intrinsically safe (i.s.) circuits may be fitted complete with an additional external label stating 'Intrisically Safe Circuits Enclosed'. The terminals for i.s. circuits may be blue in colour to suit the application. The ratings on the certification label shall be reduced accordingly.

When required, intrinsically safe (i.s.) circuits may be terminated in conjunction with non i.s. circuits when the relevant barrier or air gap is included and an additional external label stating 'Intrisically Safe and Non- Intrisically Safe circuits enclosed'. The i.s. terminals may be blue in colour to suit the application. The ratings on the certification label shall be reduced accordingly for the I.S. circuits.

The internal/external earth stud facilities are as described in the empty enclosure certificate IECEx BAS 08.0124U. The enclosures may be fitted with rail mounted or directed mounted suitably certified earth terminals to suit the application. When required a power terminal may be used as a 'clean earth' to suit the application. One or more optional earth studs to one or more of the gland plates and/or lid in accordance with IECEx BAS 08.0124U.

Entry sizes and positions are as described in the component certificate IECEx BAS 08.0124U and in the Assembly Instructions. All unused entry holes shall be fitted with a certified stopping plug as listed on the component certificate IECEx BAS 08.0124U.

When required, a component certified Breather/Drain device as described in the empty enclosure certificate IECEx BAS 08.0124U may be fitted.

When required, metallic or plastic trunking may be fitted by Hawke International inside the junction box.

Special Conditions for Safe Use

1. Unused entry holes shall be fitted with stopping plugs as specified in the empty enclosure certificate IECEx BAS 08.0124U. The operating temperature range of the enclosure is limited to that of the stopping plug fitted.

2. Only breather/drain devices as specified in the empty enclosure certificate IECEx BAS 08.0124U may be used with these enclosures. The breather/drain devices must be installed in their correct orientation in either the bottom face or bottom face gland plate of the enclosure. The operating temperature range of the enclosure is limited to that of the breather/drain device fitted.

3. When used under dust layers the maximum depth shall be no greater than 50mm.

4. All terminal screws, used and unused, shall be tightened down by the end user.

5. No more than one single or multi-stranded lead shall be connected to either side of any terminal unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated bootlace ferrule, or any method indicated on the terminal certificate.

6. Terminals shall be installed in such a manner that the creepage and clearance distances between the terminal and adjacent components, enclosure walls and covers complying with the requirements of EN 60079-7: 2007 for the rated voltage of the equipment.

7. Terminal temperatures must not exceed the operating range specified on the component certificate.

8. All terminals, and accessories such as cross-connectors, shall be installed in accordance with the terminal manufactures instructions.

9. The maximum voltage, current and dissipated power shown on the rating label must not be exceeded.

10. When connecting conductors of cross section below the maximum allowed for the particular terminal then the maximum amps per pole must be reduced inline with the maximum amps permitted for a terminal equivalent to the conductor size fitted e.g. If a terminal that can take a 6mm² conductor at 29Amps is fitted with a 2.5mm² conductor then the current shall be reduced to a maximum of 17Amps, or the rating marked on the apparatus label, whichever is the lower.

11. When metallic or plastic trunking is fitted by Hawke International inside the junction box, the trunking shall be suitable for use at 80°C, meet the creepage and clearance requirements of IEC 60079-7: 2006 and not affect the IP rating of the junction box and the maximum operating current in any circuit will then be limited to 1A.

12. Unused entries may be fitted with alternative stopping plugs and or breather drains to those listed in the schedule. The user is responsible for ensuring that the protection concept, temperature class and relevant IP rating are maintained.